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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/000,057	11/01/2001	Jason E. Dargontina	06 1421 01 01	9505
26813	7590	06/27/2005	EXAMINER	
MUETING, RAASCH & GEBHARDT, P.A. P.O. BOX 581415 MINNEAPOLIS, MN 55458			BISSETT, MELANIE D	
			ART UNIT	PAPER NUMBER
			1711	
DATE MAILED: 06/27/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/000,057

Applicant(s)

DARGONTINA ET AL.

Examiner

Melanie D. Bissett

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-19, 21 and 31-52 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17-19, 21 and 31-52 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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1. The prior art rejections from the previous final Office action have been maintained.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Claims 17-18, 31-32, and 42-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blum ('873) in view of Dai Nippon.
4. From a prior Office action:

Blum teaches an aqueous binder composition comprising a polyurethane dispersion to be used as a coating (abstract). Polyurethane dispersions using aliphatic isocyanates are preferred (col. 5 lines 24-35). The coatings are useful as basecoats or topcoats for fiber cement building materials, where the coatings are preferably cured at temperatures from room temperature to 80 °C (col. 7 lines 1-21). Thus, the reference teaches thermal curing of the coatings at temperatures lower than 100 °C. Note that the making of a "fiberboard cement siding product" is deemed an intended use. Thus, since a coated fiberboard cement product could be used as a siding product, it is the examiner's position that this limitation is anticipated by the reference. Although Blum teaches the coatings as basecoats and topcoats, the reference does not exemplify a method of providing a fiberboard cement substrate, coating the substrate with a sealer, coating the sealer with a primer, coating the primer with a decorative coating, coating the decorative coating with a top coating, and curing the top coating. Dai Nippon demonstrates that such a process is conventional in the cement board art. Dai Nippon teaches forming a basecoat on the surface of a cement board substrate, providing an ink layer on the base coat, and applying a clear coating on the ink layer (abstract). The basecoat includes a sealer layer and a primer layer, where the sealer serves to prevent elution of the minerals in the substrate and the primer serves to promote adhesion of the decorative layer [0011]. The ink layer serves to provide a desired appearance. It is the examiner's position that it would have been prima facie obvious to employ a coating system including a sealer layer, primer layer, and decorative layer according to Dai Nippon's invention in the coated substrates of Blum's invention to provide articles with improved adhesion, elution prevention, and appearance.

Regarding the claimed molecular weights, Blum teaches the use of polyester polyols having number average molecular weights of 500-50,000 (abstract). Since the polyols themselves can have molecular weights as high as 50,000, it is the examiner's position that it would have been

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prima facie obvious to form a polyurethane having a high molecular weight in the expectancy of forming a coating with equivalent solvent resistance.

Regarding the claimed acid numbers, note that Blum teaches polyester polyols having acid numbers of ≤ 10 and ≤ 15 (examples). Since the polyurethane dispersions are made by the same types of reactants as those used by the applicant, it is the examiner's position that the polyurethane dispersions of Blum would possess the applicant's claimed acid numbers. Also, note that it has been shown that polyester polyurethane dispersions made by neutralizing polyester polyurethanes conventionally possess acid numbers within the applicant's claimed range, where the starting polyesters have the same acid numbers as those of the primary reference (Blum et al. '209, col. 1 line 52-col. 2 line 17; col. 3 lines 34-38). From this showing, it is the examiner's position that the polyurethane dispersions of Blum '873 would possess the claimed acid numbers.

5. Claims 51-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blum ('873) in view of Dai Nippon, as applied to claims 17-18, 31-32, and 42-50 above, and further in view of the applicant's admitted prior art.

6. From a prior Office action:

Blum and Dai Nippon apply as above, failing to teach the method steps including stacking a coated fiberboard siding product against another siding product. The applicants admit that traditional practices using fiber cement board materials include a stacking operation for ease of shipping (p. 1 line 10-p. 2 line 15). This passage indicates that methods employing liner sheets and without liner sheets have been used for this purpose. Regardless, note that the claims do not exclude the use of liner sheets. It is the examiner's position that it would have been prima facie obvious to stack the fiber cement board articles of the Blum and Dai Nippon invention to aid the shipping operation.

7. Claims 33-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blum ('873) in view of Dai Nippon, as applied to claims 17-18, 31-32, and 42-50 above, and further in view of Takahashi ('352).

8. From a prior Office action:

Blum and Dai Nippon apply as above, teaching protective top coating layers but failing to specify the thickness of the top layer or the use of abrasion resistance agents. Takahashi teaches polyurethane coatings for fiber cement substrates, also teaching the conventionality of using

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protective layers at a thickness of 5-30 μm (col. 7 lines 1-2). It is the examiner's position that it would have been prima facie obvious to one of ordinary skill in the art to use a conventional coating thickness for the top coatings in Blum and Dai Nippon to optimize solvent resistance and protection of the underlying layers.

Furthermore, Takahashi teaches the conventionality of adding particles to the surface protective layers to improve abrasion resistance of the articles (col. 4 lines 52-67). Because the coatings of Blum and Dai Nippon serve to protect underlying layers of a building material, it is the examiner's position that it would have been prima facie obvious to include additives in the top coatings known to improve the abrasion resistance of the articles.

9. Claims 19 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blum ('873) in view of Dai Nippon, and Takahashi ('352) as applied to claims 33-41 above, and further in view of Harper et al.

10. From a prior Office action:

The references apply as above, noting the use of cement fiberboard substrates but failing to note the distinct compositions of those substrates. Harper discloses non-asbestos corrugated sheets comprising amounts of silica, cement, and cellulose fibers to form sheets suitable for external cladding and roofing (abstract). The densities of the sheets exceed 1400 kg/m^3 (1.4 g/cm^3) (col. 3 lines 1-4). These sheets have improved strength and durability for asbestos-free products (col. 1 lines 48-52). Thus, it is the examiner's position that it would have been prima facie obvious to use the substrates of Harper's invention for the composites of Blum, Kubota Corp, and Takahashi to produce a product having improved strength and durability.

Response to Arguments

11. Regarding the applicant's arguments that the Blum reference does not disclose a coating that is "mar and abrasion resistant," it is the examiner's position that the term is relative. By the broadest reasonable interpretation, a coating having any amount of mar and abrasion resistance would be encompassed. Also, since the coatings of the Blum reference are of the claimed polyurethane dispersions, it is the examiner's position that Blum's coatings would inherently have good mar and abrasion resistant properties.

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12. In response to the applicant's arguments that the Dai Nippon reference does not teach the claimed coating methods, it is noted that the reference teaches coating the substrate with each of the layers noted in the abstract. The applicant argues that one skilled in the art would not consider laminating to be encompassed by a "coating" step. The applicant cites a definition of coating that teaches coatings as liquid applications by spraying or by vapor deposition. First, it is the examiner's position that one skilled in the art, given current technology, would recognize that coatings are formed by many other methods. The examiner looks to Merriam-Webster's Dictionary for the broadest reasonable interpretation of the verb "coat," which encompasses covering or spreading with a finishing or protecting layer. One skilled in the art would recognize the layers of Dai Nippon as finishing or protecting layers.

13. Next, the examiner looks to the art for examples of conventional coating methods. Several prior art references teach laminating as a coating method, suggesting that one skilled in the art would certainly not exclude laminating methods from the broad "coating" step. See Brown, col. 25 lines 40-52; Hotta et al., col. 26 lines 32-35; Vogt et al., col. 7 lines 7-25; Hong et al., col. 4 lines 19-25; Dost et al., col. 1 lines 21-26; Lewis et al., [0067]. From the recognition in the prior art of lamination as a coating method, it seems reasonable to assume that one skilled in the art would read lamination as a coating step by the broadest reasonable interpretation of "coating."

14. Finally, it is noted that the Dai Nippon reference seems to teach coating liquid solutions or dispersions by teaching curtain flow coaters, paints, printing, and "coatings" in general ([0014]; examples).

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15. Regarding the applicant's arguments that the claims must be interpreted in view of the specification, it is noted that, while this is true, limitations from the specification cannot be read into the claims. The claims call for coating certain layers onto a substrate. The prior art teaches laminating layers onto a substrate, and it is the examiner's position that this is encompassed by the "coating" steps.

16. Regarding the applicant's arguments that there is no motivation to combine the references, it is the examiner's position that one skilled in the art, when considering both references, would recognize the benefits of using the Dai Nippon coatings. This is supported by the references' teachings of beneficial properties obtained from the coatings. Since those skilled in the art are constantly looking to improve coatings in any way conventional in the art, one would recognize the benefits of the combination.

17. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melanie D. Bissett whose telephone number is (571) 272-1068. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Melanie D. Bissett
Patent Examiner
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mdb